Who makes better and quicker online dating decisions?

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Evolutionary psychology suggests that overall, men are less selective than women when it comes to mate selection. The current study sought to test this assumption within an online dating environment. We predicted that men would take less time to make a date preference compared to women, and secondly that men would make a greater number of positive choices compared to women. We also predicted that the attractiveness of potential dates would have a greater effect on men's decisions than on those of women. A 2 (gender) x 3 (attractiveness level) mixed design, was employed with choice decision time and number of positive and negative responses to potential dates as dependent variables with impulsivity scores included as covariates. Participants were presented with 30 photographs and asked to indicate whether they would be interested in dating that person, responding yes or no. The results showed that when controlling for impulsivity men made significantly more positive choices compared to women yet took significantly longer to make decisions comparted to women. The findings are consistent with existing research in this area and increase our understanding of male and female behaviour on dating apps.

Keywords: attractiveness; dating preferences; evolutionary psychology; gender differences; online dating

The growth in the use of mobile dating is evidenced by the fact that some 22% of 18-to-24 year olds reported using proximity based apps in 2016, compared to just 5% in 2013 (Smith, 2016). Dating app users upload photos of themselves and are then themselves presented with photos of potential dates. If users like a picture of someone, and are interested in dating them, they can indicate this by swiping their phone screen to the right. Conversely, if they are not interested in a profile presented to them, they can swipe their phone screen to the left, reducing date selection, to a binary yes or no choice (David & Cambre, 2016).

Survey research focussing on the dating app Tinder, has found distinct gender differences where men report looking for casual sex and relationship seeking and women report employing Tinder for friendship and self-validation (James, 2015; Ranzini & Lutz, 2017; Sumter et al., 2017). While there appear to be gender differences in people's motivations and intentions in using Tinder, there is also a need for research focussing not only intentions but also mate selection behaviour. To this end, previous research has indicated that men swipe right to more potential partners than women, suggesting that men are less selective than women when using Tinder (Tyson et al., 2016).

Strategy theories of mate selection on online dating apps

Mating strategies observed on Tinder typically indicate that men like more women but receive fewer matches, whilst women like fewer men but receive more matches. For example, female match rates are 10.5% compared to male match rates of 0.6% (Tyson et al., 2016). Questionnaire data combined with Tinder observations reveal that men are aware that women are more selective and are consequently less selective themselves in order to increase their chances of receiving a match. Similarly, women are aware that men are less selective, and are therefore more selective themselves (Tyson et al., 2016). This strategy has also been demonstrated in studies which record behaviour alone, where in an attempt to increase their chances, men were more likely than women to use both Tinder and online dating agencies to find casual sex. Because men are less selective, they should select more potential dates on Tinder (Gatter & Hodkinson, 2015).

Decision time and mate selection

Individuals typically take 150 milliseconds to differentiate an attractive face from a non-attractive face (Schacht et al., 2008), which is faster than the process of recognising a face (Caharel et al., 2014). Because partner attractiveness is more important for men than for women, (Zhang & Deng; 2012), male decision times in making a preference when using online dating apps should be longer than female decision times. Conversely, women evaluate potential partners based on intelligence, earning potential, work ethic and reactions to children (Buss, 1989; Das & Relojo-Howell, 2021; Sprecher et al, 1994; La Cerra, 1995; Fisman et al, 2006; Hitsch et al, 2010; Schwarz & Hassebrauck, 2012). Therefore, because women have more information to process than men, then they may take longer to reach decisions when using dating apps, in comparison to males.

Impulsivity and mate selection

In addition to the gender differences outlined above, impulsivity may also influence decision-making times in online dating. For example, females are less impulsive than males, especially during ovulation (Hosseini-Kamkar & Morton, 2014). Furthermore, there are noted individual differences in impulsivity (Brown et al., 2006; Harden & Tucker-Drob, 2011; Gorlyn et al., 2004). Impulsive individuals make decisions based on instant gratification whilst disregarding any future negative consequences (Wittmann & Paulus, 2008). Consequently, impulsive individuals will make quicker decisions to receive gratification more quickly. Therefore, in online dating impulsive individuals may be more likely to state that they are interested in a potential partner and take less time to make such a decision, without considering the likelihood of not receiving a match or matching with an individual in whom they are not interested. Furthermore, impulsive individuals spend less time speaking to a potential partner before meeting (Hahn et al., 2018). Overall, impulsivity might explain some of the variance in decision making in mate selection.

Hypotheses

Firstly, because men are less selective in partner choice an in online dating, and further that women have more criteria to consider before making a decision, we hypothesise that men will make significantly a greater amount of positive date choices overall.

Secondly, because physical attractiveness is a more salient factor in date choice for men, we hypothesize that this will influence the number of dates selected. In other words, they will choose more dates for attractive women and fewer for less attractive women. However, because physical attractiveness is less salient in date choice for women, then physical attractiveness of potential dates will not influence female date choice.

Finally, because women are less likely to make a date choice decision based on physical attractiveness, then they have less information to appraise in a photograph only stimulus and will make faster decisions. Conversely, if women use the photograph to make an appraisal regarding other partner choice criteria such as intelligence or earning potential, then they should make slower decisions.

METHOD

Participants

Eighty participants (37 females and 43 males) who were students at a provisional university in the UK, were recruited via advertisements and social media sharing. Their ages ranged from 18–29 years (mean = 21.20, *SD* = 2.34). In terms of relationship status, 56 reported being single while 24 participants reported being in a relationship. Only heterosexual participants were included in the study.

Materials

For this study, a simulated dating site environment was created, in which participants were presented sequentially with a series of photographs of potential dates. Participants could indicate 'yes' or 'no', in terms of whether they would choose the photograph presented to them as a date. Two versions of the dating environment were constructed, one for males and the other for females. Choice (positive or negative) and decision time of each participant was recorded.

The photographs used showed each person while alone and with a relatively plain background, and not confounded by indications of hobbies or interests. In addition, the faces displayed no overt personality characteristics. Most of photographs were of Caucasians, and featured individuals between the ages of approximately18 and 29 matching the age of the participants recruited for this study. Photograph quality was restricted to a resolution of 200 X 200 pixels, and were cropped into a square to avoid stretching on the screen, with all photographs being of a similar size. Examples are shown in Figure 1.

Figure 1
Example photographs

Instrument

The Barratt Impulsivity Scale was employed to measure three components of impulsivity, defined as attentional, motor and planning (Chen, 2013). Responses to each item on the scale were given on a four-point Likert scale from 1 (rarely, never) to 4 (almost always/always).

The attentional component of the scale consisted of eight items, an example of which is "I have racing thoughts". The motor component consisted of 11 items, for example, "I act on the spur of the moment", and the planning component of the scale also consisted of 11 items, for example, "I plan trips well ahead of time". The minimum score on the scale was 30 with a theoretical maximum score of 120. A score between 52 and 71 is considered to be within the normal range of impulsivity. Gorlyn et al. (2004) point out that decision making such as the formulation of responses, the time taken to make a decision and time perception are related to impulsivity as measured by the Barratt Scale, making it an appropriate covariate of decision making in online dating. Orozco-Cabal et al (2010) report internal consistency of the scale at 0.79 and a test-retest reliability at 0.80.

Procedure

This study was a 2 (gender) X 3 (attractiveness group) mixed design, with gender being a between participants factor and category of attractiveness a within participants factor. Attractiveness categories were divided into low, medium and high. The two dependent variables were the number of positive (yes) responses by participants to photographs of potential dates, and the time in milliseconds it took participants to reach a decision. Positive responses indicated that participants would be interested in dating the person shown in the photograph. Impulsivity as described above was entered as a covariate.

Participants were told that they would be presented with 30 photographs of potential dates of the opposite sex, which would be displayed one at a time. They were instructed to press a red button if they were not interested in dating this person (negative response), and a green button if they were interested in dating them (positive response). If participants had previously reported that they were already in a relationship they were asked to imagine that they were single for the purpose of the study. The presentation of low, medium and high attractiveness photos to participants were randomised, but each participant was presented with the photographs in the same order. Following viewing the simulated dating environment, participants were asked to complete the Barratt Impulsiveness Scale, and then thanked for their time and debriefed.

RESULTS

Attractiveness Ratings

In order to establish attractiveness ratings of the photographs, two male judges rated the attractiveness of the 30 female photos and two female judges rated the attractiveness of the 30 male photographs. Attractiveness was rated on a 10-point scale ranging from 1 (very unattractive) to 10 (very attractive). Inter-rater reliability was established using a Pearson's correlation. Judges scores correlated significantly for the female photos (r = 0.56, p = 0.001) and also for the male photos (r = 0.65, p = 0.001). The final attractiveness ratings were based on the mean ratings for the male and female photos, and for the purposes of this study were grouped into equal numbers of low medium and high attractiveness ratings.

Relationship status

An independent t test was conducted on choices and decision times between participants who stated they were currently in a relationship and those who reported not being in a relationship. No differences were observed between the scores for these groups and therefore participants who stated they were currently in a relationship were retained in the subsequent date choice and decision time analysis.

Date choice

Table 1 displays the means and standard deviations for choices of male and female photographs in the high, medium and low attractiveness categories. Scores range between 1 and 2 where 1 represents absolute negative choice and 2 absolute positive choice.

Table 1
Means and standard deviations for male and female date choice in low, medium and high attractiveness level conditions

	Low attractiveness choice	Medium attactiveness choice	High attactiveness choice
Males	1.59 (*SD* = .23)	1.32 (*SD* = .23)	1.69 (*SD* = .25)
Females	1.06 (*SD* = .09)	1.31 (*SD* = .23)	1.51 (*SD* = .26)

A 2 X 3 ANCOVA was performed, with gender as the between participants factor and attractiveness category of photograph as the within participants factor. A main effect for gender was observed (F (1,75) = 28.58, p = 0.01) indicating that males made more positive choices compared to females. No main effect for attractiveness level was observed, however an interaction effect was observed between participant gender and attractiveness level (F (2,150) = 52.41, p = 0.001). Females made more positive choices when attractiveness level was higher and fewer positive choices when the attractiveness level was lower. Males on the other hand made similar amounts of positive choices across all attractiveness conditions. It is interesting to note that while females were likely to make more positive choices in the high attractiveness category condition than in the low attractiveness category condition, the mean score in the high attractiveness group was 1.51, indicating that they were still equally likely to make a positive choice as a negative choice in this condition.

Decision time

Table 2 shows the means and standard deviations for the decision times for males and females for the photographs of high, medium and low levels of attractiveness.

Table 2
Means and standard deviations for male and female decision times in ms in low, medium and high attractiveness level conditions

	Low attractiveness choice	Medium attactiveness choice	High attactiveness choice
Males	1689.2 (*SD* = 571.8)	1763.21 (*SD* = 571.7)	1756.56 (*SD* = 623.1)
Females	1154.14 (*SD* = 604.9)	1256.91 (*SD* = 465.1)	1289.87 (*SD* = 457.9)

A further 2 X 3 way ANCOVA was carried out with participant gender as the between participants factor and attractiveness group as the within participants factor. Firstly, no significant differences between genders was observed for the covariate impulsivity. A main effect was observed for gender (F (1,74) = 19.88, p=0.001) with males taking significantly longer to make a decision compared to females. No significant differences were observed between attractiveness groups meaning that no differences in decision times were observed between the attractiveness categories. Finally, no interaction between attractiveness groups and gender were observed for decision times.

DISCUSSION

The current study aimed to investigate gender differences in number of potential dates chosen and decision times to make such choices in a simulated dating environment, whilst accounting for impulsivity. The study makes a unique contribution in measuring online dating behaviour whilst accounting for impulsivity.

Firstly, the results revealed that males made significantly more positive choices than females, therefore hypothesis one can be accepted. This finding is consistent with the evolutionary psychology Buss (1989) which suggests that males are likely to pursue multiple partners and engage in short-term strategies, because parental costs to them are low compared to the parental costs

incurred by females (La Cerra, 1995; Fisman et al, 2006; Schwarz & Hassebrauck, 2012). In addition, the results show support for Tappé et al. (2013) who stated that men were more likely to engage in casual sexual behaviour than women. In addition, this finding is also consistent with previous studies indicating that men are more interested in casual sex than women on Tinder, (James, 2015; Ranzini & Lutz, 2017; Sumter et al, 2017). Finally, this finding shows support for Tyson et al's (2016) findings which showed that men made more positive choices on Tinder than women and because men are aware that women are more selective, they make more positive choices to increase their chances of a match.

Hypothesis two predicted that date attractiveness would affect male decisions more than female decisions. However, this hypothesis was not supported, because men were likely to make equal numbers of positive choices in all attractiveness conditions. However, women increased their number of positive choices when attractiveness level of date photos presented was higher and made fewer positive choices when attraction level was lower. One possible explanation for this finding is provided by Gatter and Hodkinson (2015) who noted that younger Tinder users had more promiscuous motives. Participants in the current study had a mean age of 21.2 years old suggesting that they might have held more promiscuous views with both the female and male participants employing short term mating strategies. Females holding more promiscuous views pursue short term mating strategies, favouring attractive partners over attractive ones (Gangestad & Simpson, 2000; Kruger et al, 2003).

One confounding variable here is the perceived mate value of participants, which could have affected their choices. Bailey et a. (2011) noted that men were more attracted to women who had a similar mate value to themselves, possibly due to their increased perception of attainability. Similarly, men possessing a higher perceived mate value are more selective (Yong & Li, 2012). In women, it has been noted that those with a more diverse body mass index and a less attractive face are less selective at a speed-dating event (Overbeek et al., 2013). This shows that perceived mate value has an effect on selectivity in mate selection.

Hypothesis three predicted that there would be a difference in decision making times between men and women, and that this would be influenced by the amount of information they were appraising in each photograph. The results revealed that men took over 10 times longer than 150 milliseconds to make a decision, which was the time Schacht et al (2008) suggested that the brain takes to determine attractiveness. Maybe male date selection is possibly more complex than simply determining the attractiveness level of a potential date. The finding supports Zhang and Deng (2012) who stated that men might take longer to process attractiveness than women, potentially because men value attractiveness more than women. As previously mentioned, because of the age of female participants in the current study, they may have been employing short-term dating strategies and making decisions based solely on attraction levels, which explains the fact that their decision times were quicker.

The findings of the current study provide a greater understanding of how men and women behave when using online dating apps, which can be summarised as follows. Consistent with previous research, men were less selective than women. Furthermore, women made more positive choices as attraction level of the potential dates increased. This suggests that women when were possibly using short-term mating strategies, consistent with how younger women might select dates. Thirdly, men were just as likely to make positive choices to both low and high attractiveness dates. Finally, the results showed that men took longer than women to make decisions regarding date choice.

In future research, the inclusion of a perceived mate value measure (Arnocky, 2018) would also further clarify our understanding of decision making in online dating, and such a measure may be differentially sensitive for participants of different ages.

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